Fred D Day-Lewis

List of Publications by Year
in descending order

84 papers	3,062 citations	159585 30 h-index	168389 53 g-index
86 all docs	86 docs citations	86 times ranked	2632 citing authors

#	Article	IF	Citations
1	Applying petrophysical models to radar travel time and electrical resistivity tomograms: Resolution-dependent limitations. Journal of Geophysical Research, 2005, 110, .	3.3	256
2	Advancing processâ€based watershed hydrological research using nearâ€surface geophysics: a vision for, and review of, electrical and magnetic geophysical methods. Hydrological Processes, 2008, 22, 3604-3635.	2.6	228
3	Improved hydrogeophysical characterization and monitoring through parallel modeling and inversion of time-domain resistivity andinduced-polarization data. Geophysics, 2010, 75, WA27-WA41.	2.6	159
4	Time-lapse imaging of saline-tracer transport in fractured rock using difference-attenuation radar tomography. Water Resources Research, 2003, 39, .	4.2	132
5	A physical explanation for the development of redox microzones in hyporheic flow. Geophysical Research Letters, 2015, 42, 4402-4410.	4.0	129
6	Origin and Extent of Fresh Paleowaters on the Atlantic Continental Shelf, USA. Ground Water, 2010, 48, 143-158.	1.3	116
7	Use of electrical imaging and distributed temperature sensing methods to characterize surface waterâ€“groundwater exchange regulating uranium transport at the Hanford 300 Area, Washington. Water Resources Research, 2010, 46, .	4.2	102
8	Advances in interpretation of subsurface processes with timeâ€lapse electrical imaging. Hydrological Processes, 2015, 29, 1549-1576.	2.6	102
9	Continuous resistivity profiling to delineate submarine groundwater dischargeâ€”examples and limitations. The Leading Edge, 2006, 25, 724-728.	0.7	93
10	Marine electrical resistivity imaging of submarine groundwater discharge: sensitivity analysis and application in Waquoit Bay, Massachusetts, USA. Hydrogeology Journal, 2010, 18, 173-185.	2.1	92
11	Monitoring groundwaterâ€surface water interaction using timeâ€series and timeâ€frequency analysis of transient threeâ€dimensional electrical resistivity changes. Water Resources Research, 2012, 48, .	4.2	82
12	Assessing the resolution-dependent utility of tomograms for geostatistics. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	81
13	Investigation of aquiferâ€estuary interaction using wavelet analysis of fiberâ€optic temperature data. Geophysical Research Letters, 2009, 36, .	4.0	79
14	Identifying fracture-zone geometry using simulated annealing and hydraulic-connection data. Water Resources Research, 2000, 36, 1707-1721.	4.2	66
15	An overview of geophysical technologies appropriate for characterization and monitoring at fractured-rock sites. Journal of Environmental Management, 2017, 204, 709-720.	7.8	65
16	Combined interpretation of radar, hydraulic, and tracer data from a fractured-rock aquifer near Mirror Lake, New Hampshire, USA. Hydrogeology Journal, 2006, 14, 1-14.	2.1	63
17	Geoelectrical evidence of bicontinuum transport in groundwater. Geophysical Research Letters, 2007, 34, .	4.0	58
18	New permafrost is forming around shrinking Arctic lakes, but will it last?. Geophysical Research Letters, 2014, 41, 1585-1592.	4.0	57

#	Article	IF	Citations
19	Understanding Water Column and Streambed Thermal Refugia for Endangered Mussels in the Delaware River. Environmental Science & Technology, 2013, 47, 11423-11431.	10.0	53
20	Inversion of multi-frequency electromagnetic induction data for 3D characterization of hydraulic conductivity. Journal of Applied Geophysics, 2011, 73, 323-335.	2.1	44
21	<scp>1DTempPro V2</scp>: New Features for Inferring Groundwater/Surfaceâ€Water Exchange. Ground Water, 2016, 54, 434-439.	1.3	44
22	Geoelectrical inference of mass transfer parameters using temporal moments. Water Resources Research, 2008, 44, .	4.2	43
23	Moment inference from tomograms. Geophysical Research Letters, 2007, 34, .	4.0	41
24	Electrical characterization of nonâ€Fickian transport in groundwater and hyporheic systems. Water Resources Research, 2008, 44, .	4.2	41
25	A Computer Program for Flowâ€Log Analysis of Single Holes (FLASH). Ground Water, 2011, 49, 926-931.	1.3	41
26	Direct geoelectrical evidence of mass transfer at the laboratory scale. Water Resources Research, 2012, 48, .	4.2	34
27	Geophysical Monitoring of a Field-Scale Biostimulation Pilot Project. Ground Water, 2006, 44, 430-443.	1.3	33
28	Anomalous solute transport in saturated porous media: Relating transport model parameters to electrical and nuclear magnetic resonance properties. Water Resources Research, 2015, 51, 1264-1283.	4.2	33
29	Implications of Rateâ€Limited Mass Transfer for Aquifer Storage and Recovery. Ground Water, 2008, 46, 591-605.	1.3	32
30	1DTempPro: Analyzing Temperature Profiles for Groundwater/Surfaceâ€water Exchange. Ground Water, 2014, 52, 298-302.	1.3	32
31	Surface Geophysical Methods for Characterising Frozen Ground in Transitional Permafrost Landscapes. Permafrost and Periglacial Processes, 2017, 28, 52-65.	3.4	30
32	Object-Based Inversion of Crosswell Radar Tomography Data to Monitor Vegetable Oil Injection Experiments. Journal of Environmental and Engineering Geophysics, 2004, 9, 63-77.	0.5	29
33	Imaging Pathways in Fractured Rock Using Threeâ€Dimensional Electrical Resistivity Tomography. Ground Water, 2016, 54, 186-201.	1.3	28
34	Spatially variable stageâ€driven groundwaterâ€surface water interaction inferred from timeâ€frequency analysis of distributed temperature sensing data. Geophysical Research Letters, 2012, 39, .	4.0	27
35	A distribution-based parametrization for improved tomographic imaging of solute plumes. Geophysical Journal International, 2011, 187, 214-224.	2.4	26
36	Quantifying solute transport processes: Are chemically â€œconservativeâ€• tracers electrically conservative?. Geophysics, 2011, 76, F53-F63.	2.6	26

#	Article	IF	Citations
37	Dualâ€domain massâ€transfer parameters from electrical hysteresis: Theory and analytical approach applied to laboratory, synthetic streambed, and groundwater experiments. Water Resources Research, 2014, 50, 8281-8299.	4.2	26
38	Pore network modeling of the electrical signature of solute transport in dualâ€domain media. Geophysical Research Letters, 2017, 44, 4908-4916.	4.0	25
39	Direct Observations of Hydrologic Exchange Occurring With Lessâ€Mobile Porosity and the Development of Anoxic Microzones in Sandy Lakebed Sediments. Water Resources Research, 2018, 54, 4714-4729.	4.2	25
40	Integrated multi-scale characterization of ground-water flow and chemical transport in fractured crystalline rock at the Mirror Lake Site, New Hampshire. Geophysical Monograph Series, 2007, , 201-225.	0.1	24
41	Return flows from beaver ponds enhance floodplain-to-river metals exchange in alluvial mountain catchments. Science of the Total Environment, 2019, 685, 357-369.	8.0	24
42	Timeâ€Lapse Electrical Geophysical Monitoring of Amendmentâ€Based Biostimulation. Ground Water, 2015, 53, 920-932.	1.3	22
43	Experimental shifts of hydrologic residence time in a sandy urban stream sedimentâ€“water interface alter nitrate removal and nitrous oxide fluxes. Biogeochemistry, 2020, 149, 195-219.	3.5	22
44	Residence Time Controls on the Fate of Nitrogen in Flowâ€Through Lakebed Sediments. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 689-707.	3.0	20
45	Simultaneous estimation of local-scale and flow path-scale dual-domain mass transfer parameters using geoelectrical monitoring. Water Resources Research, 2013, 49, 5615-5630.	4.2	18
46	Formation Criteria for Hyporheic Anoxic Microzones: Assessing Interactions of Hydraulics, Nutrients, and Biofilms. Water Resources Research, 2020, 56, no.	4.2	17
47	Integrating geophysical, hydrochemical, and hydrologic data to understand the freshwater resources on Nantucket Island, Massachusetts. Geophysical Monograph Series, 2007, , 143-159.	0.1	16
48	<title>Attenuation-difference radar tomography: results of a multiplane experiment at the U.S. Geological Survey Fractured-Rock Research Site, Mirror Lake, New Hampshire</title>. , 2000, , .		15
49	Evaluating long-term patterns of decreasing groundwater discharge through a lake-bottom permeable reactive barrier. Journal of Environmental Management, 2018, 220, 233-245.	7.8	15
50	Development of a new semi-analytical model for cross-borehole flow experiments in fractured media. Advances in Water Resources, 2015, 76, 97-108.	3.8	13
51	Fusion of active and passive hydrologic and geophysical tomographic surveys: The future of subsurface characterization. Geophysical Monograph Series, 2007, , 109-120.	0.1	12
52	Accounting for tomographic resolution in estimating hydrologic properties from geophysical data. Geophysical Monograph Series, 2007, , 227-241.	0.1	12
53	Multi-scale preferential flow processes in an urban streambed under variable hydraulic conditions. Journal of Hydrology, 2019, 573, 168-179.	5.4	11
54	SOLUTE TRANSPORT PROCESSES. , 2006, , 117-159.		11

#	Article	IF	Citations
55	Geoelectrical measurement and modeling of biogeochemical breakthrough behavior during microbial activity. Geophysical Research Letters, 2009, 36, .	4.0	10
56	Simulation of lessâ€mobile porosity dynamics in contrasting sediment water interface porous media. Hydrological Processes, 2018, 32, 2030-2043.	2.6	10
57	Application of Recursive Estimation to Heat Tracing for Groundwater/Surfaceâ€Water Exchange. Water Resources Research, 2022, 58, .	4.2	10
58	An On-Campus Well Field for Hydrogeophysics Education and Undergraduate Research. Journal of Geoscience Education, 2006, 54, 480-486.	1.4	9
59	Statistical mapping of zones of focused groundwater/surface-water exchange using fiber-optic distributed temperature sensing. Water Resources Research, 2013, 49, 6979-6984.	4.2	9
60	A Fractured Rock Geophysical Toolbox Method Selection Tool. Ground Water, 2016, 54, 315-316.	1.3	7
61	DTSGUI: A Python Program to Process and Visualize Fiberâ€Optic Distributed Temperature Sensing Data. Ground Water, 2020, 58, 799-804.	1.3	7
62	MoisturEC: A New R Program for Moisture Content Estimation from Electrical Conductivity Data. Ground Water, 2018, 56, 823-831.	1.3	6
63	Estimating and Forecasting Timeâ€Varying Groundwater Recharge in Fractured Rock: A Stateâ€Space Formulation With Preferential and Diffuse Flow to the Water Table. Water Resources Research, 2021, 57, e2020WR029110.	4.2	6
64	<scp>GW</scp>/<scp>SWâ€MST</scp>: A Groundwater/<scp>Surfaceâ€Water</scp> Method Selection Tool. Ground Water, 2022, 60, 784-791.	1.3	6
65	Reframing groundwater hydrology as a <scp>dataâ€driven</scp> science. Ground Water, 2022, 60, 455-456.	1.3	6
66	The Dualâ€Domain Porosity Apparatus: Characterizing Dual Porosity at the Sediment/Water Interface. Ground Water, 2019, 57, 640-646.	1.3	5
67	Characterizing Physical Properties of Streambed Interface Sediments Using In Situ Complex Electrical Conductivity Measurements. Water Resources Research, 2021, 57, e2020WR027995.	4.2	5
68	The role of field camp in an evolving geoscience curriculum in the United States. Hydrogeology Journal, 2003, 11, 203-204.	2.1	4
69	Examining watershed processes using spectral analysis methods including the scaled-windowed fourier transform. Geophysical Monograph Series, 2007, , 183-200.	0.1	4
70	Scenario Evaluator for Electrical Resistivity Survey Pre-modeling Tool. Ground Water, 2017, 55, 885-890.	1.3	4
71	Evaluation of riverbed magnetic susceptibility for mapping biogeochemical hot spots in groundwaterâ€impacted rivers. Hydrological Processes, 2021, 35, e14184.	2.6	4
72	Post-remediation geophysical assessment: Investigating long-term electrical geophysical signatures resulting from bioremediation at a chlorinated solvent contaminated site. Journal of Environmental Management, 2022, 302, 113944.	7.8	4

#	Article	IF	Citations
73	Incorporating Snowmelt into Daily Estimates of Recharge Using a <scp>Stateâ€Space</scp> Model of Infiltration. Ground Water, 2022, 60, 721-746.	1.3	4
74	Monitoring engineered remediation with borehole radar. The Leading Edge, 2007, 26, 1032-1035.	0.7	3
75	Geophysical mapping of plume discharge to surface water at a crude oil spill site: Inversion versus machine learning. Geophysics, 2019, 84, EN67-EN80.	2.6	3
76	APPLICATION OF FREQUENCY- AND TIME-DOMAIN ELECTROMAGNETIC SURVEYS TO CHARACTERIZE THE HYDROSTRATIGRAPHY AND LANDFILL CONSTRUCTION CHARACTERISTICS AT THE AMARGOSA DESERT RESEARCH SITE, BEATTY, NEVADA. , 2016, , .		2
77	A New R Program for Flowâ€Log Analysis of Single Holes (FLASHâ€R). Ground Water, 2020, 58, 987-992.	1.3	2
78	Exploring Environmental Factors That Drive Diel Variations in Tree Water Storage Using Wavelet Analysis. Frontiers in Water, 2021, 3, .	2.3	2
79	Integrating hydrologic and geophysical data to constrain coastal surficial aquifer processes at multiple spatial and temporal scales. Geophysical Monograph Series, 2007, , 161-182.	0.1	1
80	GEOELECTRICAL MONITORING OF SOLUTE TRANSPORT IN DUAL-DOMAIN MEDIA: A REVIEW. , 2017, , .		1
81	Geophysical Tomography: The Current State of Research, Challenges, and Path Forward. , 2018, , .		1
82	Monitoring Tracers with Time-Lapse Electrical Methods: Issues with Reactions and Surface Conductance. , 2012, , .		1
83	Nuclear magnetic resonanance logs of fractured bedrock at the Hidden Lane Landfill site, Culpeper Basin, Virginia. , 2021, , .		0
84	Geostatistical mapping of salinity conditioned on borehole logs, Montebello Oil Field, California. Ground Water, 2021, , .	1.3	0